



Four years of dissolved inorganic carbon dynamics along the Belgian coast

L.-S. Schiettecatte (1), F. Gazeau (2), C. Van der Zee (3) M. Frankignoulle (1), A.V. Borges (1)

(1)Chemical Oceanography Unit, Université de Liège, 4000 Liège, Belgium.

(2)NIOO-KNAW-CEME, Korringaweg 7, P.O.box 140, 4400AC Yerseke, The Netherlands. (3) Laboratoire d'Océanographie Chimique et Géochimique des Eaux, ULB, 1050 Brussels, Belgium.

CO₂ partial pressure (pCO₂) of surface seawater along the Belgian coast (from the Scheldt mouth to offshore waters) is measured continuously since September 2000 from an autonomous system deployed on board of the R.V. Belgica. In parallel, 30 campaigns were carried on in that area to measure total alkalinity, dissolved oxygen, chlorophyll-a and nutrients (nitrate and nitrite, silicate and phosphate) from January 2001 to October 2004. We propose then to establish, compare and validate a one box LOICZ budget between dissolved inorganic carbon, phosphorus and nitrogen. And, to determine the CO₂ air-sea exchange, the Net Ecosystem Production and calcification with seasonal and annual variability for the outer Scheldt.